

## INFORMATION PAPER

CEIM-S  
15 May 98

SUBJECT: WinFrame Technology

1. Purpose. To provide information on a WinFrame which is a new technology to both aid performance for client/server applications across WAN's and to simplify configuration management for broadly utilized software.

2. Facts.

a. WinFrame is a software solution originally developed by CITRIX, Inc. that implements a three tier thin client, application server, and database server architecture. The software resides on an NT server and remote client software for the user's workstation. The client software is similar to a web browser in complexity. The WinFrame client is the only required software on the user's workstation. The application software runs on the NT server with the WinFrame client reflecting the image from the server to the client. Key strokes and mouse actions on the user's workstation are transmitted to the server as if the user was at the server location.

b. WinFrame greatly enhances performance of a client/server application over a WAN or dialup connection. Client/server applications are very chatty, that is, there are a very large number of small packets that are transmitted to for any one screen. As a result, the latency inherent in any WAN causes moderate delays for high speed (T1 and above) links over moderate lengths and significant delays for T1 connections over long links (overseas sites) or lower speed links (less than T1). With the WinFrame solution, these packets travel only between the WinFrame server and the database server that are collocated. Therefore the speed of connection is at least Ethernet speeds and up to Fast Ethernet. With this high speed link over very short distances, the latency is insignificant. The WinFrame server transfers the entire screen in large blocks to the user's workstation. By sending a small number of large packets, the latency issue is insignificant.

c. The Corps is presently testing the WinFrame solution for a variety of applications to include PROMIS, PPI communications to the CPOC, RMS, SPS, and electronic mail/Office 97.

d. Testing must be completed to prove the initial results from limited testing and to develop capacity numbers for the tested platforms.

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